CALCULATIONS
LIQUID WELL
LOG-LOG ANALYSIS

Schlumberger

LOG (DELTA P) VS. LOG (DELTA T) PLOT

HOMOGENEOUS, INFINITE SYSTEM
SKIN & VARIABLE WELLBORE STORAGE
PD VS. TD/CD

DATA IDENTIFICATION

FLOW PERIOD # 2, BUILDUP
P = 199.64 PSI @ DELTA T=0
FLOW RATE CHANGE = 15.750 STB/D LIQUID

DOWNHOLE RATES (IN RESERVOIR BBL/D)

OIL ..... 16.585 (WITH Bo=1.053 BBL/STB)
FREE GAS ... 7.270 (WITH Bg=0.01503 BBL/SCF AND Rso=37.560 SCF/STB)

COMPUTED WITH PRODUCING WATER CUT = 0.000
AND PRODUCING GAS/LIQUID RATIO = 68.271 SCF/STB

TYPE-CURVE MATCH

CURVE MATCH, CD*E(2S) = 3.71681E6
PRESSURE MATCH, PD/DELTA P = 0.004071 1/PSI
TIME MATCH, (TD/CD)/DELTA T = 1706.7 1/HR

CALCULATIONS

K/MU (TOTAL) ..... 1.371 MD/CP
KH/MU (TOTAL) ..... 13.712 MD.FT/CP
Ko (EFFECTIVE TO OIL) ..... 0.9743 MD
Kg (EFFECTIVE TO GAS) ..... 0.005458 MD
C ..... 2.370E-06 BBL/PSI
CD 0.4565
SKIN, S 7.956
RADIUS OF INVESTIGATION ... 29.314 FT @ 3.211 HR)

COMMENTS

USING HOMOGENEOUS, SKIN & VARIABLE WELLBORE STORAGE
RESERVOIR MODEL: Ca/C=19.25 (1) 0.97 (2) 0.9 (3) 26 (4)
CoD=43 (1) 32.7 (2) 11.9 (3) 46.3 (4)